

U.S.S.N. 09/732,411

Filed: December 7, 2000

AMENDMENT AND RESPONSE TO OFFICE ACTION

In the Claims

1. (presently amended) A method for ~~enhancing or decreasing adhesion of a target cell to a substrate~~ inhibiting binding of a cell to an integrin or glycosaminoglycan, comprising providing the target cell with an ~~adhesion modulatory peptide associated substrate such that adhesion of the target cell to the substrate is enhanced or decreased as compared to substrate alone wherein the target cell expresses a receptor selected from the group consisting of $\alpha 4 \beta 1$ integrins and VCAMs, wherein the peptide binds to the receptors~~ a peptide selected from the group consisting of SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:10, SEQ ID NO:12, SEQ ID NO:14M and SEQ ID NO:15.

2. (canceled) The method of claim 1, wherein the adhesion modulatory peptide comprises a peptide which specifically stimulates adhesion of the target cell.

3. (presently amended) The method of claim 1, wherein the ~~adhesion modulatory peptide comprises a peptide which specifically inhibits adhesion of the target cell~~ is SEQ ID NO:15.

4. (presently amended) The method of claim 1, wherein the ~~adhesion modulatory peptide is selected from the group consisting of an endothelial cell adhesion modulatory peptide, a fibroblast adhesion modulatory peptide and a macrophage adhesion modulatory peptide, cell is selected from the group consisting of endothelial cells, fibroblasts and macrophages; and wherein the integrin is selected from the group consisting of $\alpha 4 \beta 1$ integrins and VCAMs.~~

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5. (presently amended) The method of claim 4, wherein the ~~adhesion modulatory peptide~~ cell is an endothelial cell ~~adhesion modulatory peptide~~.

6. (canceled) The method of claim 4, wherein the adhesion modulatory peptide is a fibroblast adhesion modulatory peptide.

7. (presently amended) The method of claim 4, wherein the ~~adhesion modulatory peptide is a neutrophil adhesion modulatory peptide or a myofibroblast adhesion modulatory peptide~~ cell is a neutrophil or a myofibroblast.

8. (canceled) The method of claim 1, wherein the adhesion modulatory peptide comprises an amino acid residue sequence selected from the group consisting of SDQDNNGKGSHE (SEQ ID NO:1), SDQDQDGDGHQDS (SEQ ID NO:2), GRGDNPS (SEQ ID NO:3), TPVVPTVDITYDGRGDSLAY (SEQ ID NO:4), TPVVPTVDITYDGRGD (SEQ ID NO:5), HDRKEFAKFEEERARA (SEQ ID NO:9), DPGYIGSR (SEQ ID NO:10), KGMNYTVR (SEQ ID NO:13), and VLEP (SEQ ID NO:15).

9. (canceled) The method of claim 1, wherein the adhesion modulatory peptide comprises an amino acid residue sequence selected from the group consisting of DDDRKWGFC (SEQ ID NO:6), DSVVYGLRSK (SEQ ID NO:7), LDSAS (SEQ ID NO:8), SDV, PNGRGESLAY (SEQ ID NO:11), and DRYLKFRPV (SEQ ID NO:12).

10. (canceled) The method of claim 1, wherein the adhesion modulatory molecule enhances binding of an adhesion receptor predominantly expressed by the target cell.

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11. (presently amended) The method of claim 1, wherein the ~~adhesion modulatory molecule inhibits binding of an adhesion receptor predominantly expressed by the target cell~~ peptide is SEQ ID NO:7 or SEQ ID NO:14 and inhibits binding of a cell to a glycosaminoglycan.

12. (canceled) The method of claim 1, wherein the target cell is selected from the group consisting of an endothelial cell, a fibroblast and a macrophage.

13. (canceled) The method of claim 12, wherein the target cell is an endothelial cell.

14. (canceled) The method of claim 12, wherein the target cell is a fibroblast.

15. (canceled) The method of claim 1, wherein the target cell is a neutrophil or a myofibroblast.

16. (presently amended) The method of claim 1, wherein the ~~target~~ cell is within a cell population.

17. (presently amended) The method of claim 1, wherein the ~~target~~ cell is within a subject.

18. (presently amended) The method of claim 1, wherein the cell is immobilized on a substrate ~~is~~ selected from the group consisting of a polyvinyl surface, a gel, collagen, hyaluronic acid, titanium and PGA.

19. (amended) The method of claim 1, ~~further comprising contacting the substrate with the adhesion modulatory peptide, forming the adhesion modulatory peptide-associated substrate prior to providing the cell with the substrate~~ wherein the peptide is SEQ ID NO:12 and inhibits binding of melanoma cells.

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20. (canceled) An adhesion modulatory peptide which modulates adhesion of a target cell to a substrate.

21. (canceled) The adhesion modulatory peptide of claim 20, wherein the peptide enhances adhesion of a target cell to a substrate.

22. (canceled) The adhesion modulatory peptide of claim 20, wherein the peptide inhibits adhesion of a target cell to a substrate.

23. (canceled) The adhesion modulatory peptide of claim 20, comprising an amino acid residue sequence selected from the group consisting of SDQDNNGKGSHEs (SEQ ID NO:1), SDQDQDGDGHQDS (SEQ ID NO:2), GRGDNPS (SEQ ID NO:3), TPVVPTVDITYDGRGDSLAY (SEQ ID NO:4), TPVVPTVDITYDGRGD (SEQ ID NO:5), HDRKEFAKFEEERARA (SEQ ID NO:9), DPGYIGSR (SEQ ID NO:10), KGMNYTVR (SEQ ID NO:13), and VLEP (SEQ ID NO:15).

24. (canceled) The adhesion modulatory peptide of claim 20, comprising an amino acid residue sequence selected from the group consisting of DDDRKWGFC (SEQ ID NO:6), DSVVYGLRSK (SEQ ID NO:7), LDSAS (SEQ ID NO:8), SDV, PNGRGESLAY (SEQ ID NO:11), and DRYLKFRPV (SEQ ID NO:12).

25. (canceled) The adhesion modulatory peptide of claim 20 having a molecular weight less than about 2500 Da.

26. (canceled) A substrate treated with the adhesion modulatory peptide of claim 20.

27. (canceled) A device treated with the adhesion modulatory peptide of claim 20.

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28. (canceled) A composition comprising the adhesion modulatory peptide of claim 20 and a carrier suitable for *in vivo* use.

29. (canceled) A device for modulation of adhesion of a target cell comprising a substrate in combination with an adhesion-modulatory peptide, forming a device for modulating adhesion.